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ABSTRACT

This report presents results for Montgomery County (Maryland) Public Schools (MCPS) high school students on four tests of the College Board in the 1983-84 school year. These tests, ordered by the number of MCPS students taking them, are the Scholastic Aptitude Test (SAT), the Preliminary Scholastic Aptitude Test (PSAT), the Achievement Tests (ACH), and the Advanced Placement Tests (AP). A summary of the results across all of the tests includes the following: (1) average scores for MCPS students on College Board tests were well above national averages; (2) students showed improvements from the already high score levels of the previous year; (3) White and Asian students generally averaged substantially higher than Hispanic and Black students; (4) White and Asian students generally averaged well above the overall national average for all students; (5) all major racial/ethnic groups averaged well above their national counterparts on the SAT and ACH tests; and (6) substantially higher percentages of Asian and White students took College Board tests than did Black and Hispanic students. The remainder of the report is divided into four sections, one for each set of tests. Each section is a description of the test(s) and a presentation of results for the total county and results broken down by race, sex, and grade. (LMO)

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MONTGOMERY COUNTY
PUBLIC SCHOOLS
ROCKVILLE, MARYLAND

Performance of MCPS Students on College Board Tests

1983-1984

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MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

PERFORMANCE OF MCPS STUDENTS ON COLLEGE BOARD TESTS

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PERFORMANCE OF MCPS STUDENTS ON COLLEGE BOARD TESTS

This report presents results for MCPS high school students on four tests of the College Board in the 1983-84 school year. These tests, ordered by the number of MCPS students taking them, are the Scholastic Aptitude Test (SAT), the Preliminary Scholastic Aptitude Test (PSAT), the Achievement Tests (ACH), and the Advanced Placement Tests (AP). A summary of the results across all of the tests is provided below. The remainder of the report is divided into four sections, one for each set of tests. Within each section there will be a description of the test(s) and a presentation of results for the total county and results broken down by race, sex, and grade.

SUMMARY

Combining the results of all four of the College Board tests listed above leads to the following conclusions.

- The average (mean) scores for MCPS students on College Board tests were well above national averages. On the SAT, for example, MCPS students averaged 37 points higher on the Verbal section and 41 points higher on the math section.
- In 1984 MCPS students showed improvements from the already high score levels of the previous year.
- White and Asian students in MCPS generally averaged substantially higher than Hispanic and Black students.
- White and Asian students in MCPS generally averaged well above the overall national average for all students. MCPS Hispanic students scored near the national average for all students and MCPS black students scored below this average.
- All major MCPS racial/ethnic groups averaged well above their counterparts nationally on the SAT and ACH tests. MCPS black and Hispanic students averaged further above their national groups than did MCPS white students. There were no national race data for the other tests.
- Substantially higher percentages of MCPS Asian and white students took College Board tests than did MCPS black and Hispanic students.
- Male students in MCPS generally averaged slightly higher than female students on College Board tests.
- A slightly higher percentage of MCPS female students took College Board tests than did MCPS male students.
- Students who take the SAT or PSAT more than once generally score higher the second time.

INTERPRETIVE CAUTIONS

The performance comparisons in this report of College Board test results are presented as descriptive information. Any conclusions that are drawn from these comparisons need to be made very carefully. This caution is advised because scores on College Board tests (and many other nationally standardized tests) have been shown to be highly related to socioeconomic status (SES) factors such as the educational level and/or income of a student's parents. Thus score differences could be as much a result of those influences as of the quality of an instructional program.

Caution is also needed with these data because not all students take the College Board tests. This means that results reported for these tests should not be considered representative of all students in a particular group. When the percentage of students tested in two groups differs substantially, comparison of results in those groups must be done with caution. This is because higher achieving students generally take these tests and, therefore, the more students tested in a group, the lower the average score for that group. Finally, on some of these tests the number of students tested is so small that the results can be unduly skewed by a few students with extreme scores.

SCHOLASTIC APTITUDE TEST RESULTS

DESCRIPTION OF THE SCHOLASTIC APTITUDE TEST (SAT)

The Scholastic Aptitude Test is taken by students applying to colleges that require the scores as part of a student's academic record. The test is generally taken by high school juniors and seniors with about half of the MCPS students who take the test taking it in both their junior and senior years. Scores on the SAT range from 200 to 800.

COUNTYWIDE RESULTS

Scholastic Aptitude Test (SAT) scores for members of the Class of 1984 were the highest for any MCPS graduating class in several years.

MCPS seniors scored well above the national average on the SAT.

The overall SAT results for the MCPS Class of 1984 continued a slight upward trend that started the year before. The Verbal average increased three points to 463; the Math average increased four points to 512. These averages were well above the national average for seniors. The MCPS Verbal score was 37 points above the national average while the MCPS Math was 41 points higher.

These well-above national average scores were obtained while MCPS seniors were tested at a rate double the national rate. Sixty-nine percent of MCPS

seniors took the SAT compared to 34 percent of the seniors nationally. This makes the MCPS performance even more impressive since the SAT, and other College Board tests, are generally taken by the highest achieving students and a large percentage tested will usually depress the average score.

SAT results for MCPS and national seniors for the last 12 years are presented in Table 1. SAT results by school for the last four years are presented in Table 2. The Verbal and Math scores have been added together for each school.

RESULTS BY RACE

Asian and white students in MCPS scored substantially higher on the SAT than Hispanic and black students.

All MCPS racial/ethnic groups scored substantially above their respective groupsnationally.

MCPS white and Asian students were well above the overall national average on the SAT. MCPS Hispanics were slightly below that average while MCPS black students were well below it.

A substantially higher percentage of Asian and white students took the SAT than did black and Hispanic students.

Differences in Performance Between Racial/Ethnic Groups Within MCPS. MCPS white students scored 80 and 100 points higher than MCPS black students on the Verbal and Math sections of the SAT, respectively. Hispanic students did somewhat better than blacks as they scored 52 and 45 points below the average for white students on the Verbal and Math sections.

The trend of scores for white and Asian students in MCPS differed depending on the section of the test. On the Verbal section white students scored 42 points higher while on the Math section Asian students scored 38 points higher. Table 3 presents the MCPS SAT results by race for each high school for the last two years. The Verbal and Math scores have been added together for each school.

MCPS racial/ethnic group performance compared to that of national groups. All MCPS racial/ethnic groups scored substantially above their respective groups nationally. MCPS black students scored the most above their national counterparts with 47 and 52 point advantages on the Verbal and Math sections. MCPS Hispanic students scored 33 and 48 points above the Hispanic students nationally. The smallest differences between MCPS and national results for a racial/ethnic group were 31 and 34 points for the white students. Thus, on the SAT, minority group students in MCPS did better than white students when each group was compared to the national group with the same racial/ethnic designation.

TABLE 1

Scholastic Aptitude Test Results for Graduating Classes
for MCPS and National, 1973-1984
(Mean Scores)

	MCPS				National	
Year	Verbal	Math	Number	Percentage of September 30 Enrollment	Verbal	Math
1984	463	512	5,333	69	426	471
1983	460	508	5,383	67	425	468
1982	457	503	5,764	67	426	467
1981	458	503	5,852	68	424	466
1980	456	503	6,179	68	424	466
1979	456	500	5,999	65	427	467
1978	465	505	5,823	62	429	468
1977	464	506	5,986	63	429	470
1976	463	504	6,289	67	431	472
1975	465	499	5,988	65	434	472
1974	480	511	5,657	62	444	480
1973	481	514	5,486	62	445	481

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TABLE 2

School Scholastic Aptitude Test Results for 1981 to 1984 for Seniors

School	#	1981 Percent Tested	1981 Mean	1982 Percent Tested	1982 Mean	1983 Percent Tested	1983 Mean	1984 Percent Tested	1984 Mean
Bethesda Chevy Chase	406	83	1015	81	979	81	1019	80	1026
Blair	757	59	855	52	845	53	823	52	822
Churchill	602	88	1004	91	994	89	1037	90	1032
Damascus	701	50	969	47	963	51	915	51	914
Einstein	789	55	901	54	880	55	908	58	970
Gaithersburg	551	51	925	47	970	51	944	51	941
Walter Johnson	424	86	986	71	988	76	1020	78	996
Kennedy	815	73	902	66	939	70	928	65	930
Magruder	510	63	961	59	971	65	977	65	948
Richard Montgomery	201	51	953	57	939	52	967	51	997
Northwood	796	53	936	63	899	58	936	60	922
Paint Branch	315	66	888	70	915	66	949	71	926
Peary	806	65	956	65	926	63	917	59	923
Poolesville	152	b		b		b		47	880
Rockville	230	61	981	67	978	65	980	71	1006
Seneca Valley	104	59	943	60	950	58	965	64	934
Sherwood	503	59	907	52	916	56	909	69	913
Springbrook	798	78	948	72	996	78	934	81	990
Wheaton	782	44	904	48	848	37	877	38	892
Walt Whitman	427	92	1045	92	1067	92	1038	94	1073
Woodward	222	80	1011	80	958	81	990	80	1034
Wootton	234	86	990	83	989	90	1006	91	1016

a. The mean is the sum of the Verbal and Math means.

b. No data were reported by the College Board because fewer than 50 students were tested.

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TABLE 3

School Scholastic Aptitude Test Results by Race for 1983 and 1984 for All Students

School	#	Year	Percent Tested[a]				Mean[b]			
			Asian	Black	Hispanic	White	Asian	Black	Hispanic	White
Bethesda Chevy Chase	406	1984	36	39	21	68	977	821	940	1059
		1983	35	27	33	59	1019	784	788	1046
Blair	757	1984	32	29	16	41	751	734	679	962
		1983	27	25	12	33	754	722	754	940
Churchill	602	1984	78	40	44	70	1093	986	990	1035
		1983	73	36	51	66	1132	967	1005	1027
Damascus	701	1984	-	-	-	33	-	-	-	966
		1983	-	-	-	33	-	-	-	925
Einstein	789	1984	54	41	-	42	878	802	-	993
		1983	49	32	-	32	911	818	-	981
Gaithersburg	551	1984	56	16	-	37	942	758	-	967
		1983	48	10	-	33	873	733	-	970
Walter Johnson	424	1984	100	-	32	53	1035	-	878	1031
		1983	62	-	40	49	1078	-	894	1002
Kennedy	815	1984	58	40	-	50	997	823	-	982
		1983	44	44	-	47	976	795	-	956
Magruder	510	1984	-	-	-	48	-	-	-	957
		1983	56	-	-	41	1002	-	-	965
Richard Montgomery	201	1984	35	17	-	44	932	853	-	987
		1983	38	14	-	40	892	763		1025
Northwood	796	1984	35	-	-	43	966	757	-	947
		1983	26	31	-	42	936	809	-	965
Paint Branch	315	1984	61	45	-	54	995	772	-	966
		1983	53	40	-	46	1003	799	-	976
Peary	806	1984	56	28	-	32	1011	930	-	959
		1983	65	40	43	40	986	761	770	929

a. No data are reported because there are fewer then 10 students in the group.
b. The mean is the sum of the Verbal and Math means.

TABLE 3 (continued)

School Scholastic Aptitude Test Results by Race for 1983 and 1984 for All Students

School	#	Year	Percent Tested[a]				Mean[b]			
			Asian	Black	Hispanic	White	Asian	Black	Hispanic	White
Poolesville	152	1984	-	-	-	39	-	-	-	872
		1983	-	-	-	24	-	-	-	933
Rockville	230	1984	77	47	-	54	1064	907	-	1000
		1983	50	28	-	49	1143	724	-	1002
Seneca Valley	104	1984	84	23	-	52	1016	824	-	982
		1983	72	20	-	42	1052	782	-	977
Sherwood	503	1984	-	26	-	54	-	756	-	922
		1983	-	22	-	39	-	813	-	933
Springbrook	798	1984	76	44	-	57	1028	866	-	996
		1983	61	51	45	54	1060	835	937	998
Wheaton	782	1984	57	12	-	24	872	745	-	908
		1983	55	21	-	19	886	764	-	943
Walt Whitman	427	1984	81	63	45	74	1079	1098	1017	1071
		1983	82	53	38	66	1031	955	966	1050
Woodward	222	1984	69	-	-	64	944	-	-	1016
		1983	59	-	-	59	900	-	-	1004
Wootton	234	1984	83	58	57	68	1128	822	888	1015
		1983	81	40	50	62	1150	976	904	1006

a. No data are reported because there are fewer then 10 students in the group.
b. The mean is the sum of the Verbal and Math means.

Table 4 shows the comparison between MCPS and national results for each major racial/ethnic group in MCPS. These results are for seniors only because that is the way the national results are reported in Profiles, College-Bound Seniors, 1983 produced by the College Board. The MCPS results are for the Class of 1984. While the classes used for the national and local data are different this should not affect any of the conclusions drawn from these data because there was almost no difference in the overall national results from 1983 to 1984.

MCPS racial/ethnic group performance compared to the overall national average. The previous section explained that MCPS black and Hispanic seniors last year performed well compared to their national groups. However, their performance does not look as good when compared to the overall national average of all seniors who were tested. MCPS black seniors were considerably below the overall national average. They were 39 points below on Verbal and 54 points below on Math. MCPS Hispanic students were closer to the overall national average as they were 20 points below on Verbal and 10 points below on Math.

MCPS white and Asian students scored above the overall national average. The white students were above on both parts of the test. The Asian students were above only on the Math part.

Distribution of scores for each MCPS racial/ethnic group. The above discussion was based on group average (mean) scores because that is the easiest way to compare the performance of several groups. However, it is important to note that there were at least a few students in each group who had very high (700+) and very low (300-) scores. This can be seen from the overall score distributions for each group shown in Table 5.

Proportion of Each Group Tested. Seventy-two percent of the Asians and 68 percent of the whites in the MCPS Class of 1984 took the SAT. These percentages are considerably higher than the 48 and 40 percent of the blacks and Hispanics, respectively, that took the test.

RESULTS BY SEX

MCPS males scored higher than MCPS females on both parts of the SAT.

MCPS males and females scored well above their counterparts nationally.

A higher percentage of females than males took the SAT in MCPS.

Comparison of results for MCPS males and females. MCPS male students outscored females on both the Verbal and Math sections of the SAT. The difference on the Verbal was small, 471 to 461. It was considerably larger on the Math section, 540 to 497.

TABLE 4

Scholastic Aptitude Test (SAT) Results by Race
For MCPS Students in the Class of 1984 and for the Class of 1983[a]
Nationally

Racial/Ethnic Group		MCPS Students, Grades 9-12, 1983-84			National Seniors, 1983		Difference	
MCPS Designation	College Board Designation	Percent Tested	Verbal Mean	Math Mean	Verbal Mean	Math Mean	Verbal	Math
Asian	Asian/Pacific American	72	421	554	395	514	26	40
Black	Black	48	386	414	339	369	47	45
Hispanic	Mexican-American				375	417		
	Puerto Rican				365	397		
	Total Hispanic	40	405	458	372	410	33	48
White	White	68	474	518	443	484	31	34

a. The latest national results available are for 1983. While the national data are for a different year then the MCPS data, it is doubtful that this difference effects the comparison. The overall national scores for 1984 were one point higher on Verbal and three points higher on Math.

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TABLE 5

Distribution of SAT Scores in MCPS
By Race, 1983-84

VERBAL

Score Range	ASIAN			BLACK			HISPANIC			WHITE			TOTAL		
	N	%	C%	N	%	C%	N	%	C%	N	%	C%	N	%	C%
750-800	2	0	100				1	1	100	23	0	100	25	0	100
700-749	19	2	100	2	0	100	2	1	100	113	2	100	132	2	100
650-699	37	4	98	8	1	100	5	3	99	310	4	98	324	4	98
600-649	63	7	93	17	3	99	9	5	96	578	8	94	597	8	94
550-599	82	10	86	30	5	96	15	8	92	910	13	86	940	12	86
500-549	101	12	77	61	9	91	24	12	84	1088	15	74	1115	14	74
450-499	112	13	65	79	12	82	26	13	72	1320	18	59	1336	17	60
400-449	108	13	52	112	17	70	32	16	59	1151	16	40	1227	16	43
350-399	82	10	39	111	17	53	29	14	43	952	13	25	1006	13	28
300-349	81	9	30	110	17	36	28	14	29	521	7	12	602	8	15
250-299	72	8	20	71	11	19	18	9	15	232	3	4	342	4	7
200-249	103	12	12	53	8	8	12	6	6	90	1	1	215	3	3

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TABLE 5 (continued)
Distribution of SAT Scores in MCPS
By Race, 1983-84

MATH

Score Range	ASIAN			BLACK			HISPANIC			WHITE			TOTAL		
	N	%	C%	N	%	C%	N	%	C%	N	%	C%	N	%	C%
750-800	35	4	100				4	2	100	117	2	100	144	2	100
700-749	87	10	96	5	1	100	7	4	98	385	5	98	439	6	98
650-699	118	14	86	14	2	99	6	3	95	661	9	93	698	9	93
600-649	119	14	72	30	5	97	19	10	92	905	12	84	930	12	84
550-599	117	14	58	43	7	93	19	10	82	1037	14	72	1053	13	72
500-549	132	15	45	69	11	86	33	16	73	1136	16	57	1211	15	59
450-499	91	11	30	89	14	75	26	13	56	1067	15	42	1078	14	43
400-449	79	9	19	93	14	62	30	15	43	905	12	27	966	12	29
350-399	40	5	10	120	18	48	25	12	28	591	8	15	669	9	17
300-349	29	3	5	115	18	29	21	10	16	346	5	7	451	6	9
250-299	15	2	2	67	10	12	9	5	6	122	2	2	197	3	3
200-249				9	1	1	2	1	1	15	0	0	24	0	0

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Comparison of results for MCPS males and females to national males and females. The score patterns described above for MCPS males and females are similar to those for the national groups. In the Class of 1984 nationally males averaged slightly higher on the Verbal, 433 to 420; and considerably higher on the Math, 495 to 449.

Proportion of Each Group Tested. Fifty-three percent of the females in the junior and senior classes took the SAT in the 1983-84 school year. This was somewhat higher than the 46 percent of the males in those classes. The higher percentage of females being tested could account for some, but probably not all, of the score differences between the two groups. The SAT results by sex for the county and each school are presented in Table 6 for all students tested in the county.

COMPARISON OF RESULTS ACROSS GRADES

MCPS students who took the SAT in both their junior and senior years showed slight improvement in their senior year.

MCPS students who took the SAT only in their junior year scored slightly higher than those who took it in both years and substantially higher than those who took it only in their senior year.

Trend for students who take the SAT in their junior and senior years. Members of the MCPS Class of 1984 who took the SAT in both their junior and senior years showed a 19 point improvement (461 to 480) on the Verbal section and a 16 point improvement (518 to 534) on the Math section. About half (49 percent) of the class took the test in both their junior and senior years. These results are presented in Table 7.

Scores for students who take the SAT in only one grade. The other half of the Class of 1984 took the test only in their junior or senior years. The 30 percent who took it only in their senior year averaged well below the overall average for the class. They scored 407 on the Verbal and 447 on the Math. On the other hand, the 21 percent of the class who took the test only in their junior year scored much higher than the class average. They scored 500 on the Verbal and 549 on the Math. It is likely that many of these students simply did not bother to take the test in their senior year because they had done so well the first time they took the test. These results are also presented in Table 7.

The fact that a sizable portion of the Class of 1984 took the SAT only in their junior year and scored very high does not appear to be unique to that class. When we compare the results for all juniors and all seniors tested in the 1983-84 school year, we find the juniors outscoring the seniors by 480 to 451 on the Verbal and 533 to 500 on the Math. The number of students tested in each grade probably has little effect on this comparison because there were only about 10 percent more seniors tested. The results are presented in Table 8.

TABLE 6

Percentage of Students Taking the SAT and Mean Scores
By Sex in Each School For All Students Tested, 1983-84

School	Percentage Tested[a]		Verbal Mean		Math Mean	
	Male	Female	Male	Female	Male	Female
B-CC	51	62	503	492	549	513
Blair	25	39	400	403	459	424
Churchill	65	72	504	489	564	522
Damascus	29	33	463	450	541	485
Einstein	41	43	457	455	516	482
Gaithersburg	31	39	465	448	509	482
Walter Johnson	50	55	480	484	549	521
Kennedy	46	49	447	441	524	490
Magruder	40	52	466	434	536	478
Richard Montgomery	35	37	445	455	533	506
Northwood	33	45	432	447	506	468
Paint Branch	52	56	448	444	512	484
Peary	31	35	443	460	520	490
Poolesville	41	43	431	410	479	407
Rockville	49	60	470	465	548	515
Seneca Valley	46	54	474	450	545	496
Sherwood	46	56	437	430	503	461
Springbrook	51	59	472	458	541	498
Wheaton	23	27	396	413	506	452
Whitman	75	70	515	499	587	538
Woodward	55	69	485	464	573	503
Wootton	68	68	484	476	563	511
TOTAL	46	53	471	461	540	497

a. The percentage tested is based on enrollment in the junior and senior classes because 97 percent of the students tested were in those grades.

b. No results are reported if fewer than 10 students were tested.

TABLE 7

SAT Results for MCPS Class of 1984
By Year Tested

	Number Tested	Verbal Mean	Math Mean
Students Tested in One Year			
Junior Year	1036	500	549
Senior Year	1537	407	447
Students Tested Both Years			
Junior Year	2466	461	518
Senior Year	2466	480	534
Total Results By Year			
Junior Year	3502	472	527
Senior Year	4003	452	501

TABLE 8

Number of MCPS Students Taking the SAT
and Mean Scores by Grade

1983-84

	Verbal		Math	
	Number	Mean	Number	Mean
Grade 11	3636	480	3636	533
Grade 12	4003	451	4003	500

PRELIMINARY SCHOLASTIC APTITUDE TEST RESULTS

DESCRIPTION OF THE PRELIMINARY SCHOLASTIC APTITUDE TEST (PSAT)

The Preliminary Scholastic Aptitude Test is aimed at high school juniors. They take the test as practice for the Scholastic Aptitude Test (SAT) and to try to qualify for various college scholarships including the National Merit Scholarship. However, the PSAT is not limited to juniors and many sophomores now take it to help prepare themselves for the scholarship competition. Only junior year scores can be used to win the scholarships. The test is administered each year in October. Scores on the PSAT range from 20 to 80.

COUNTYWIDE RESULTS

In the 1983-84 school year PSAT scores for MCPS juniors improved slightly from the previous year.

The PSAT average for MCPS juniors last year was well above the national average.

The average (mean) PSAT score for MCPS juniors in the 1983-84 school year was 45.5 on the Verbal section, up from 44.9 in 1982. The MCPS average on the Math section for 1983 was 49.7, up from 49.2 in 1982. The MCPS results are well above the national average of 40.9 in Verbal and 44.2 in Math. Fifty-two percent of last year's junior class took the PSAT. The PSAT results for MCPS juniors are summarized in Table 9.

RESULTS BY RACE

White and Asian students in MCPS scored substantially higher on the PSAT than did Hispanic and black students.

MCPS white and Asian students scored substantially above the overall national average, MCPS Hispanics were at about the national average, and MCPS black student were somewhat below the national average.

The percentage of students who took the PSAT was substantially higher for white and Asian students than for black and Hispanic students.

On the Verbal section of the PSAT MCPS white and Asian juniors scored 5 and 4 points higher than the overall national average (mean) of 41. Hispanic students scored 1 point below the national average of 41, and black students scored 2 points below. On the Math section white and Asian students scored above the national average of 45 by 5 and 8 points, while Hispanic students scored at the national average and black students 3 points below. There is no national report of PSAT results by race so we cannot

TABLE 9

Percentage of Students Taking the PSAT and Mean Scores
by Race in Each School for All Students Tested, 1983-84

	Percentage Tested				Verbal Mean[a]				Math Mean[a]			
	Asian	Black	Hispanic	White	Asian	Black	Hispanic	White	Asian	Black	Hispanic	White
BCC	30	22	8	54	47	41		49	57	44		51
Blair	12	14	13	25	38	37	31	46	41	39	34	47
Churchill	88	22	40	54	50	42	42	47	57	45	50	51
Damascus	67	14	25	38				43				49
Einstein	35	26	15	39	41	42		45	48	45		47
Gaithersburg	105	15	25	51	38	39		43	46	40		47
W. Johnson	100	50	13	49	46			47	50			51
Kennedy	39	29	20	33	40	39		45	52	43		51
Magruder	85	12	14	43	43			45	50			50
R. Montgomery	18	16	6	31	37	38		46	58	43		49
Northwood	19	21	13	27	45	38		44	49	39		48
Paint Branch	93	41	31	40	45	39		44	54	41		48
Peary	38	23	19	27	40			43	53			48
Poolesville	100	10	33	31				42				43
Rockville	63	31	35	44	46	40		46	54	44		51
Seneca Valley	51	13	11	24	49	45	46	46	56	44		52
Sherwood	55	23	38	33		37		42		40		46
Springbrook	59	34	33	42	43	40		45	50	41		49
Wheaton	56	16	11	25	38	34		41	48	38		45
Whitman	71	92	41	64	47	44	49	50	59	48	54	53
Woodward	47	38	28	53	42			47	52			51
Wootton	98	23	52	59	47		43	46	55		46	51
County	51	23	20	43	44	39	41	46	53	42	46	50

a. No results are reported for groups of fewer than 10.

tell how MCPS racial groups did compared to their counterparts nationally. The pattern of results by race for sophomores was similar to that for juniors except that Hispanic students averaged about the same as white and Asian students. Table 9 shows these data.

Substantially higher percentages of white and Asian students took the PSAT than black and Hispanic students. Fifty-seven percent of the Asian students in the junior class and 56 percent of the white students took the test compared to 33 percent of the black students and 25 percent of the Hispanic students.

RESULTS BY SEX

Males scored higher than females on both the Verbal and Math sections.

MCPS males and females both averaged well above the overall national average.

A higher percentage of females than males took the test.

Males in Grade 11 scored 1 point higher (46 to 45) than females on the Verbal section and 5 points higher (52 to 47) on the Math section.

Fifty-six percent of the females in Grade 11 took the PSAT compared to 47 percent of the males. The percentages were slightly more even in Grade 10, where 28 percent of the females and 23 percent of the males took the test. As with the SAT, the higher percentage of females being tested could partly explain why their scores were lower.

The results by sex are shown in Table 10.

COMPARISON OF RESULTS ACROSS GRADES

Scores for juniors were only slightly higher than those for sophomores.

About twice as many juniors as sophomores took the PSAT.

Students who took the PSAT twice showed substantial improvement the second time they take the test.

Average PSAT scores were similar for MCPS juniors and sophomores in October 1983. On both sections of the test the juniors scored one point higher. The difference was 45 to 44 on the Verbal and 50 to 49 on the Math. It must be noted, however, that fewer students took the test in Grade 10 than Grade 11. Twenty-six percent of the tenth grade students took the PSAT compared to 52 percent of the students in Grade 11. This large difference in the percent tested makes it difficult to compare the performance of the two groups. The results for the sophomore and junior classes in October 1983 are presented in Table 11.

TABLE 10

Percentage of Students Taking the PSAT and Mean Scores
by Sex in Each School for All Students Tested

School	Percentage Tested		Verbal Mean		Math Mean	
	Male	Female	Male	Female	Male	Female
BCC	36	51	50	47	54	48
Blair	16	20	40	42	43	42
Churchill	53	55	47	47	53	50
Damascus	35	39	43	42	51	46
Einstein	33	37	43	46	48	46
Gaithersburg	38	58	43	42	48	45
W. Johnson	44	55	47	47	53	49
Kennedy	33	32	43	43	51	48
Magruder	40	42	45	44	53	47
R. Montgomery	23	27	45	44	51	47
Northwood	22	27	43	43	49	45
Paint Branch	45	52	44	42	49	46
Peary	23	31	44	42	51	46
Poolesville	26	33	41	43	43	43
Rockville	38	50	46	45	54	49
Seneca Valley	22	26	47	46	53	50
Sherwood	23	39	44	41	50	44
Springbrook	38	45	46	42	51	45
Wheaton	21	32	41	39	48	42
Whitman	61	67	50	48	56	52
Woodward	42	58	46	46	52	49
Wootton	57	63	47	44	54	48
County	36	44	46	44	52	47

TABLE 11

MCPS Results on the PSAT by Grade
For October 1983

	Number Tested	Percent Tested	Verbal Mean	Math Mean
Sophomores	2,025	26	44	49
Juniors	4,155	52	45	50

About 35 percent of the juniors who took the PSAT in October 1983 also took it the year before. Their average scores increased considerably from the first to second time they were tested. On the Verbal section their average went from 45 to 51; on the Math section it went from 51 to 56. These students scored substantially higher in their junior year than did students who took the test only as juniors. There was a nine point difference on each section for these two groups. These data are presented in Table 12.

The "practice effect" that may have helped cause some of the score differences cited above can be seen from results for a small group (289) of sophomores last year. This group took the regular PSAT in October. They also participated in a Practice PSAT administration in November or December. In the second administration they took a form of the test that had been used nationally the year before. Their scores improved by 3 points on the Verbal and 2 points on the Math. These gains may be more impressive than those from sophomore to junior years discussed above. This is because there was very little time for any instruction the students received to have much effect on their scores. Most of the gains can probably be attributed to having had the experience of taking the real PSAT before the practice one. The results for students who took both the "practice" and the "real" PSAT are presented in Table 13.

TABLE 12

PSAT Results for MCPS Class of 1985
By Year Tested

	Number Tested	Verbal Mean	Math Mean
Students Tested in One Year			
Sophomore	389	40	46
Junior	2,702	42	47
Students Tested Both Years			
Sophomore	1,453	45	51
Junior	1,453	51	56
Total Results By Year			
Sophomore	1,842	44	50
Junior	4,155	45	50

TABLE 13

Performance By MCPS Students Who Took the
PSAT in October 1983 and a "Practice"
Form in November or December 1983

	Number Tested	Verbal Mean	Math Mean
"Real" PSAT	289	45	50
"Practice" PSAT	289	48	52

ACHIEVEMENT TESTS

DESCRIPTION OF THE COLLEGE BOARD ACHIEVEMENT TESTS

College Board Achievement Tests (ACH) are taken by students applying to colleges that require scores on these tests as part of a student's academic record. There are 15 subject matter tests that are administered several times each year. The tests are generally taken by high school juniors and seniors. Scores on these tests range from 200 to 800, the same as on the SAT.

COUNTYWIDE RESULTS

College Board Achievement Tests scores for the MCPS Class of 1984 continued a five year upward trend.

MCPS students scored well above the national average on the Achievement Tests.

The overall Achievement Tests results for the Class of 1984 showed a 9 point increase from the year before, from 578 to 587. This continued an upward trend that started in 1980. The 1984 results were well above the national average of 537 for seniors. MCPS students scored highest on math and science tests (Math II, Physics, Chemistry) and lowest on Spanish and English Composition. These high and low patterns are similar to the national results. The MCPS and national results on the ACH for the last five years are presented in Table 14. Results for seniors only are presented in this table so they can be compared to a similar group nationally.

When non-seniors in 1983-84 are added to the MCPS data the overall average increases to 592. The high and low subjects remain the same. ACH results for all MCPS students tested in 1983-84 are shown in Table 15.

RESULTS BY RACE

Hispanic students had the highest average ACH tests scores in MCPS, followed closely by white and Asian students. Black students scored substantially lower.

All major MCPS racial/ethnic groups except black students scored well above the overall national average on the ACH.

All major MCPS racial/ethnic groups scored well above their counterparts nationally.

MCPS black and Hispanic students took the ACH at a much lower rate than did MCPS Asian and white students.

Performance on the ACH by all major racial/ethnic groups in MCPS was well above the national average of 537 except for MCPS black students. Hispanic students in MCPS had the highest overall average at 614. Asian and white

TABLE 14

College Entrance Examination Board Achievement Tests Results
for Graduating Classes for MCPS and National, 1980-84[a]

	MCPS										National				
	1984		1983		1982		1981		1980		1984	1983	1982	1981	1980
Test	Number Tested	Mean	Number Tested	Mean	Number Tested	Mean	Number Tested	Mean	Number Tested	Mean	Mean	Mean	Mean	Mean	Mean
American History	145	578	151	558	173	547	202	536	240	525	521	516	511	508	501
Biology	304	597	315	567	263	574	300	577	359	583	550	544	548	546	551
Chemistry	366	621	387	613	373	617	373	614	381	615	573	569	575	571	573
English Composition[b]	1,509	565	1,569	562	1,648	563	1,650	554	1,782	556	518	518	520	512	518
European History	59	590	68	571	82	551	76	571	178	571	548	549	544	544	539
French	317	577	320	568	350	566	364	570	371	563	544	548	546	546	550
German	45	590	[c]		29	607	45	53	151	548	578	567	563	551	552
Literature	160	571	147	559	184	576	186	567	214	566	521	523	521	517	514
Mathematics I	832	573	962	567	999	573	1,032	571	1,096	561	542	543	545	539	536
Mathematics II	675	698	615	687	575	696	590	688	635	685	659	655	661	654	653
Physics	113	626	116	627	91	619	97	616	73	615	597	595	592	595	592
Spanish	259	540	249	537	267	554	230	532	267	517	528	533	531	529	524
Average	1,575	587	1,637	578	1,720	578	1,709	574	1,854	569	537	537	537	532	532

[a] Results are for anytime the student was tested, not just his/her senior year.
[b] English Composition includes the results from the December administration that includes a written section.
[c] Fewer than 25 students tested. No results were provided by the College Board.

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TABLE 15

Number of Students Taking College Board Achievement Tests and Mean Scores by Race, 1983-84[a]

Achievement Test	ASIAN #	ASIAN Mean	BLACK #	BLACK Mean	HISPANIC #	HISPANIC Mean	WHITE #	WHITE Mean	TOTAL[b] #	TOTAL[b] Mean
American History	13	554	11	444	1	-	111	594	136	579
Biology	50	617	12	607	4	-	270	588	336	593
Chemistry	83	633	10	552	6	-	304	616	403	619
European History	5	-	1	-			39	592	45	594
English Composition	109	527	48	493	11	599	746	576	916	566
English Composition Essay	72	534	35	498	13	522	617	565	737	558
French	23	559	18	546	1	-	234	570	277	568
German	2	-	1	-			42	581	45	583
Literature	8	-	10	510	2	-	129	576	149	572
Math I	83	616	58	527	16	569	704	574	862	575
Math II	122	701	18	643	8	-	567	691	715	692
Physics	30	672	5	-	1	-	95	631	131	637
Spanish	17	535	10	482	16	711	241	536	284	544
Average[c]	255	609	97	527	34	614	1779	592	2167	592
Total Tests[c]	677		238		84		4362		5363	
Percentage Tested[d]	23		5		5		15		14	
National Average (1983 Seniors)		535		476		512		541		537

a. No mean is presented for any group of fewer than 10 students.

b. The numbers and means in this column may not match the sum, or mean of the groups presented because American Indians are included in the totals.

c. The numbers in these rows do not match the sum or mean of the tests presented. This row includes results from several tests taken by less than 10 students. Also, the mean computed in this row is based on using the mean score for each student.

d. This is based on the September 30 enrollment in Grades 11 and 12 since 93 percent of the students who took the Achievement Tests are in these grades.

students were slightly lower at 609 and 592, respectively. The average for MCPS black students was 527. Comparisons across groups on the various subject tests should not be made because of the small numbers of black and Hispanic students that were tested. ACH results by race are presented in Table 15. These data include all MCPS students tested last year, not just seniors. This was done because of the small numbers of minority students tested in any single grade.

All MCPS racial/ethnic groups scored well above their counterparts nationally. MCPS Hispanics averaged 102 points higher than did Hispanics (grouped as Mexican-American and Puerto-Rican by the College Board) nationally. The smallest difference between MCPS and national racial/ethnic groups was 51 points for black and white students. It should be noted that the national data are for the 1984 senior class while the MCPS data include all students tested.

As on other College Board tests, black and Hispanic students in MCPS take the ACH at a smaller rate than do Asian and white students. Only 5 percent of the black and Hispanic students in last year's junior and senior classes took the ACH. This can be compared to 23 percent of the Asian students and 15 percent of the white students. This large difference in percent tested could effect any comparison of scores across racial/ethnic groups. As pointed out in earlier sections, testing a higher percentage of students on a College Board test will often lower the average of the group because generally the most able students take these tests.

RESULTS BY SEX

Males scored higher than females in MCPS on the ACH tests.

Almost the same percentage of males and females took the ACH tests.

Males averaged 27 points higher (606 to 579) than females on the ACH in MCPS in the 1983-84 school year. These scores were somewhat higher than the male and female averages nationally but the difference was similar to that found in the national results.

The largest differences favoring males were on European History, Physics, and American History. The only tests on which females averaged higher were German, Literature, and English Composition. ACH results by sex are presented in Table 16.

RESULTS BY SCHOOL

School averages for the past two years are presented in Table 17. These results have not been presented by race or sex because of the small numbers of students taking these tests in many schools.

TABLE 16

Number of Students Taking College Board
Achievement Tests and Mean Scores
By Sex, 1983-84

Achievement Test	Male		Female	
	#	Mean	#	Mean
American History	92	598	44	538
Biology	167	607	169	579
Chemistry	245	625	158	609
European History	26	627	19	548
English Composition	451	566	465	567
English Composition with Essay	320	550	417	564
French	80	571	197	566
German	15	559	30	596
Literature	52	557	97	580
Math I	361	602	501	556
Math II	387	711	328	670
Physics	105	649	26	587
Spanish	92	552	192	540
Average [a]	1030	606	1137	579
Total Tests [a]	2549		2814	
Percentage Tested [b]	13		14	
National Average (1983 seniors)		548		525

a. The numbers in these rows do not match the sum or mean of the tests presented. This row includes results from several tests taken by less than 10 students. Also, the mean computed in this row is based on using the mean score for each student.

b. This is based on the September 30 enrollment in Grades 11 and 12 since 93 percent of the students who took the Achievement Tests are in these grades.

TABLE 17

Percentage of Students Taking the Achievement Tests and Mean Scores in Each School for All Students Tested

School	Percentage Tested		Mean[a]	
	1984	1983	1984	1983
BCC	31	29	583	594
Blair	3	2	567	553
Churchill	30	19	579	599
Damascus	4	3	601	533
Einstein	5	5	585	647
Gaithersburg	5	5	596	555
W. Johnson	18	13	603	600
Kennedy	8	5	572	587
Magruder	6	8	590	591
R. Montgomery	9	3	591	594
Northwood	3	3	620	566
Paint Branch	7	4	588	607
Peary	5	5	601	571
Poolesville	3	4		
Rockville	14	9	581	601
Seneca Valley	8	5	579	571
Sherwood	5	4	555	573
Springbrook	14	7	613	581
Wheaton	2	1	586	
Whitman	42	33	610	608
Woodward	22	18	604	610
Wootton	22	13	588	602
County	14	10	592	595

a. Results are not reported for schools with fewer than 10 students tested.

ADVANCED PLACEMENT RESULTS

DESCRIPTION OF THE ADVANCED PLACEMENT TESTS (AP)

Advanced Placement Tests are usually taken by high school students seeking college credit or exemption from college freshman courses. These students take the test after completing a course designed to prepare them for the test. AP tests are given in 24 courses each May. Scores on the test range from 1 to 5. The most popular tests in MCPS are English, Math, and European History.

COUNTYWIDE RESULTS

MCPS students scored well above the national average on Advanced Placement Tests.

MCPS students scored highest on the AP Biology and American History tests.

The average (mean) score across all tests for the county was 3.52 in 1984. This is .40 higher than the national average. The average for MCPS has shown slight but steady increases every year since 1980 when it was 3.42. The subjects in which MCPS students scored highest were Biology (3.9) and American History (3.7). Average AP scores for the MCPS students for the past five years are presented in Table 18.

Eighty-four percent of the scores earned by MCPS students were 3 or higher, which was a one percent increase from last year. Only 70 percent of the scores earned by students nationally were 3 or higher.

RACE

All major MCPS racial/ethnic groups except blacks scored well above the overall national average on the AP test.

Asian and white students took AP tests at a rate almost four times greater than did Hispanic and black students in MCPS.

Performance across all tests was well above the overall national average (3.12) for all MCPS racial/ethnic groups except black students. White students averaged 3.6 and Asian and Hispanic students averaged 3.5. Black students were slightly below the national average at 3.0. Results by race for individual subjects should not be used for comparisons because so few students took each test. AP results by race are presented in Table 19.

Very small percentages of students in each group took AP tests. Only two percent of the black students and four percent of the Hispanic students were tested. Nine percent of the white and 13 percent of the Asian students were tested.

TABLE 18

Number of Advanced Placement Tests and Mean Scores

Academic Years 1980-1984

	1984		1983		1982		1981		1980		National 1984
	Number	Mean	Number	Mean	Number	Mean	Number	Mean	Number	Mean	Mean
American History	162	3.68	175	3.88	161	3.46	135	3.62	147	3.64	3.10
Biology	206	3.94	164	3.57	137	3.75	176	3.78	155	3.70	3.25
Chemistry	175	3.54	133	3.65	108	3.76	118	3.56	94	3.73	3.02
English	462	3.50	487	3.51	448	3.51	429	3.47	442	3.46	3.04
European History	297	3.39	247	3.31	218	3.19	182	3.07	171	3.24	3.13
French Language	75	3.59	62	3.65	50	3.26	43	3.47	47	3.36	3.01
Math/Calculus	290	3.35	284	3.35	237	3.55	271	3.25	283	3.10	3.19
Physics	70	3.50	78	3.62	63	3.48	57	3.25	52	3.04	3.20
Spanish Language	79	3.49	46	3.49	45	3.42	69	3.29	41	3.57	3.49
Other[a]	50	4.00	43	4.01	46	3.55	41	3.32			3.17
Total MCPS	1866	3.55	1729	3.51	1513	3.50	1521	3.43	1432	3.42	3.12

a. Other includes Art History, Art-Studio Drawing, Art-Studio General, Computer Science, French Literature, German Language, Latin/Catullus Horace, Music Listening/Literature, Music Theory and Spanish Literature.

TABLE 19

Number of Advanced Placement Tests
and the Mean Scores by Race, 1983 and 1984[a]

		Asian		Black		Hispanic		White		Total[b]	
		#	Mean	#	Mean	#	Mean	#	Mean	#	Mean
American History	1984	14	3.6	2	-	1	-	143	3.7	160	3.7
Biology	1984	37	3.7	5	-	5	-	158	4.0	205	3.9
Chemistry	1984	34	3.9	5	-	2	-	131	3.5	172	3.5
English	1984	32	3.5	10	3.2	6	-	404	3.5	452	3.5
European History	1984	28	3.5	5	-	2	-	255	3.4	290	3.4
French Language	1984	6	-	2	-	3	-	64	3.6	75	3.6
Math/Calculus	1984	59	3.3	4	-	4	-	215	3.4	282	3.4
Physics	1984	19	3.4	0	-	2	-	43	3.7	64	3.4
Spanish Language	1984	6	-	0	-	7	-	61	3.4	74	3.5
Total Tests[c]	1984	237	3.5	34	3.0	36	3.5	1515	3.6	1822	3.5
Total Students[d]	1984	149		27		27		1048		1251	
Percentage Tested[e]	1984	13		2		4		9		8	

a. No mean is presented for any group of fewer than 10 students.

b. The values in this column are slightly different from those in Table 18. We did not receive results for a few students who were included in the summary from the College Board that was used for that table.

c. The numbers in this row do not match the sum or mean of the tests presented because the table does not include several tests that are taken by only a few students.

d. Some students take more than one test. The mean reported in this row is based on each student's mean score so that each student is counted only once. This is different from the preceding row where a student was counted once for each test he/she took.

e. This is based on the September 30 enrollment in Grades 11 and 12 since 94 percent in 1983 and 95 percent in 1984 of the students who took the AP tests were in those grades.

RESULTS BY SEX

Males scored slightly higher than females on AP tests in MCPS.

Males took more math and science tests and females took more language tests.

The average score was slightly higher for males than for females (3.6 to 3.5) on the AP tests. Males scored higher on all subjects except French Language. On English both groups averaged 3.5. AP results by sex are presented in Table 20.

Eight percent of each group was tested. However, there were differences in the number of each sex taking various subjects. The biggest differences in favor of males were in Chemistry, Math, and Physics. Females took many more English and foreign language tests.

COMPARISON OF AP PERFORMANCE AND GRADES IN AP COURSES

The relationship between AP test performance and course grades ranges from moderate to weak across the subjects.

It is somewhat more difficult to get a 5 on an AP course than to get an A in the related course.

The correlation between scores on the AP tests and grades in the courses related to the tests varied considerably across tests. The highest correlations tended to be found in science and math subjects. However, there was an interesting exception to this trend if the groups taking the Math and Physics tests are divided into the specific tests they took. For example, for the students who took the Physics - Mechanics test the correlation was .59, the highest for any course. For those students who took the Physics - Electricity and Magnetism test the correlation was .20, the lowest. A similar situation was found for students taking the two different Math/Calculus tests. The correlations between AP scores and course grades are presented in Table 21.

Often when AP results are reviewed, people try to assign letter grades to the AP scores to get a better understanding of what the scores mean. This procedure does not work too well for MCPS students. Generally about two-thirds of the students who receive a grade of A in the course get a score that is less than 5 on the test. The situation is somewhat more consistent for students who get a 5 on the tests. Only about a quarter of them receive a grade that is less than A. Thus, it is harder to get a 5 on the AP tests than it is to get an A in the course. Table 21 shows these percentages for each major AP test in MCPS.

SCHOOL RESULTS

School averages for the past two years are presented in Table 22. These results have not been presented by race or sex because of the small numbers of students taking these tests in many schools.

TABLE 20

Number of Advanced Placement Tests
and the Mean Scores by Sex, Spring 1984[a]

	Male		Female		Totals	
	Number	Mean	Number	Mean	Number	Mean
American History	86	4.0	74	3.4	160	3.7
Biology	100	4.0	105	3.9	205	3.9
Chemistry	122	3.6	50	3.3	172	3.5
English	181	3.5	271	3.5	452	3.5
European History	168	3.5	122	3.2	290	3.4
French Language	26	3.4	49	3.7	75	3.6
Math/Calculus	179	3.5	103	3.2	282	3.4
Physics	58	3.5	6	-	64	3.5
Spanish Language	21	3.4	53	3.5	74	3.5
Total Tests	959	3.6	863	3.5	1822	3.5
Total Students	650		601		1251	
Percentage Tested	8		8		8	

a. No mean is presented for any group of fewer than 10 students.

TABLE 21

Data Showing the Relationship Between
AP Test Scores and Grades in AP Courses

Subject[a]	Correlation With Grade	Percent of Students With A Scoring Less Than 5	Percent of Students Scoring 5 With Grade Less Than A
American History	.32	63	32
Biology	.53	60	18
Chemistry	.44	68	27
English	.26	75	37
European History	.34	73	25
Math/Calculus AB	.28	72	31
Math/Calculus BC	.52	50	10
Physics-Mechanics	.59	71	0
Physics-Electricity and Magnetism	.20	64	0

a. No data are presented for French Language and Spanish Language because there are no AP courses in those subjects.

TABLE 22

Advanced Placement Results
by School, 1983 and 1984

School	Number of Tests[a]		Mean		Percentage Achieving Score of 4 or above	
	1984	1983	1984	1983	1984	1983
B-CC	123	121	3.75	4.05	59	74
Blair	41	40	3.37	3.20	44	40
Churchill	229	172	3.33	3.38	38	47
Damascus	24	13	3.58	3.62	46	34
Einstein	58	64	3.21	3.64	34	53
Gaithersburg	81	85	3.43	3.14	49	32
Walter Johnson	137	107	3.40	3.72	44	59
Kennedy	47	90	3.15	2.79	34	24
Magruder	68	48	3.29	3.44	37	40
Richard Montgomery	112	81	3.38	3.28	42	41
Northwood	37	37	3.57	3.05	59	30
Paint Branch	96	69	3.74	3.49	58	49
Peary	24	38	3.13	3.00	29	24
Poolesville	–	10	–	4.10	–	70
Rockville	64	57	3.27	3.77	38	58
Seneca Valley	40	33	3.35	3.67	45	58
Sherwood	58	54	2.97	2.94	29	30
Springbrook	139	113	3.97	3.65	68	52
Wheaton	41	27	3.02	3.41	37	48
Whitman	271	243	4.05	3.85	70	62
Woodward	70	82	3.56	3.62	50	56
Wootton	103	145	3.50	3.70	47	55
County	1,866	1,729	3.54	3.53	50	50
National			3.12	3.13	36	36

a. No results are reported for schools with fewer than 10 tests.

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